

ANALYTICAL REPORT

August 21, 2018

Work Order: 1H80865

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Report To
Vicki Baker City of Sioux City 3100 S Lewis Blvd Sioux City, IA 51102

Work Order Information
Date Received: 08/09/2018 11:50AM Collector: Dake, Lanu/Trunk, Kim Phone: (712) 224-5178 PO Number:

Project : Weekly Permit Testing

Project Number: [none]

Analyte	Result	MRL	Batch	Method	Analyst	Analyzed	Qualifier
1H80865-01	Raw-Influent Waste (C)			Matrix:Water		Collected: 08/07/18 07:35	
Nitrogen, total	86.9 mg/L	0.400	[CALC]	TKN+NOX	SAA	08/16/18 14:25	
Nitrogen, Nitrate+Nitrite	0.52 mg/L	0.40	1BH0689	EPA 353.2	SAA	08/16/18 11:13	
Phosphorus, total	9.06 mg/L	1.00	1BH0720	EPA 365.4	SAA	08/16/18 14:25	
Nitrogen, Kjeldahl, total	86.4 mg/L	1.25	1BH0720	EPA 351.2	SAA	08/16/18 14:25	
1H80865-02	Effluent After Disinfection (G)			Matrix:Water		Collected: 08/08/18 12:45	
Oil and Grease	57 mg/L	5	1BH0506	EPA 1664A	JDK	08/13/18 14:14	
1H80865-03	Effluent After Disinfection (C)			Matrix:Water		Collected: 08/07/18 07:45	
Nitrogen, total	20.1 mg/L	0.400	[CALC]	TKN+NOX	SAA	08/16/18 14:25	
Nitrogen, Nitrate+Nitrite	17.8 mg/L	0.40	1BH0689	EPA 353.2	SAA	08/16/18 11:13	
Phosphorus, total	2.02 mg/L	0.40	1BH0720	EPA 365.4	SAA	08/16/18 14:25	
Nitrogen, Kjeldahl, total	2.27 mg/L	0.50	1BH0720	EPA 351.2	SAA	08/16/18 14:25	

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Determination of Conventional Chemistry Parameters - Quality Control

Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1BH0506 - Wet Chem Preparation										
Blank (1BH0506-BLK1)				Prepared & Analyzed: 08/13/18						
Oil and Grease	ND	4	mg/L							
LCS (1BH0506-BS1)				Prepared & Analyzed: 08/13/18						
Oil and Grease	38	4	mg/L	40.0000		95.8	78-114			
LCS Dup (1BH0506-BSD1)				Prepared & Analyzed: 08/13/18						
Oil and Grease	38	4	mg/L	40.0000		94.2	78-114	1.58	18	
Batch 1BH0689 - Wet Chem Preparation										
Blank (1BH0689-BLK1)				Prepared & Analyzed: 08/16/18						
Nitrogen, Nitrate+Nitrite	ND	0.10	mg/L							
LCS (1BH0689-BS1)				Prepared & Analyzed: 08/16/18						
Nitrogen, Nitrate+Nitrite	5.01	0.10	mg/L	5.00500		100	90-110			
Matrix Spike (1BH0689-MS1)				Source: 1H80846-01		Prepared & Analyzed: 08/16/18				
Nitrogen, Nitrate+Nitrite	21.1	0.40	mg/L	20.0200	0.80	101	90-110			
Matrix Spike Dup (1BH0689-MSD1)				Source: 1H80846-01		Prepared & Analyzed: 08/16/18				
Nitrogen, Nitrate+Nitrite	21.0	0.40	mg/L	20.0200	0.80	101	90-110	0.703	10	
Batch 1BH0720 - Wet Chem Preparation										
Blank (1BH0720-BLK1)				Prepared & Analyzed: 08/16/18						
Phosphorus, total	ND	0.40	mg/L							
Nitrogen, Kjeldahl, total	ND	0.50	"							

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Determination of Conventional Chemistry Parameters - Quality Control

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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1BH0720 - Wet Chem Preparation										
LCS (1BH0720-BS1)				Prepared & Analyzed: 08/16/18						
Phosphorus, total	19.7	0.40	mg/L	20.0000		98.3	90-110			
Nitrogen, Kjeldahl, total	18.8	0.50	"	20.0000		93.8	90-110			
Matrix Spike (1BH0720-MS1)				Source: 1H80845-02 Prepared & Analyzed: 08/16/18						
Phosphorus, total	44.6	0.80	mg/L	40.0000	4.98	99.1	90-110			
Nitrogen, Kjeldahl, total	39.3	1.00	"	40.0000	2.40	92.3	90-110			
Matrix Spike Dup (1BH0720-MSD1)				Source: 1H80845-02 Prepared & Analyzed: 08/16/18						
Phosphorus, total	44.1	0.80	mg/L	40.0000	4.98	97.9	90-110	1.10	10	
Nitrogen, Kjeldahl, total	41.0	1.00	"	40.0000	2.40	96.5	90-110	4.18	10	

ND = Non Detect; REC= Recovery; RPD= Relative Percent Difference

Certified Analyses included in this Report

Method/Matrix		Analyte	Certifications
EPA 1664A in Water			
		Oil and Grease	KS-NT,SIA1X
EPA 351.2 in Water			
		Nitrogen, Kjeldahl, total	SIA1X,KS-NT
EPA 353.2 in Water			
		Nitrogen, Nitrate+Nitrite	KS-NT,SIA1X
EPA 365.4 in Water			
		Phosphorus, total	SIA1X,KS-NT
Code	Description	Number	Expires
KS-KC	Kansas Department of Health and Environment-KC	E-10110	04/30/2019
KS-NT	Kansas Department of Health and Environment (NELAP)	E-10287	10/31/2018
MO-KC	Missouri Department of Natural Resources	140	04/30/2019
SIA1X	Iowa Department of Natural Resources	95	02/01/2019


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End of Report

A handwritten signature in cursive script that reads "Dara Hanson".

Keystone Laboratories, Inc.

Dara Hanson
Project Manager I

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CHAIN OF CUSTODY RECORD									
Keystone LABORATORIES, INC. 600 East 17th Street South Newton, IA 50208 641-792-8451			Page 1 of 1 Printed: 7/27/2018 11:26:29AM www.keystonelabs.com			INVOICE TO Arac Montagne City of Sioux City 3100 S Lewis Blvd Sioux City, IA 51102			
REPORT TO Vicki Baker City of Sioux City 3100 S Lewis Blvd Sioux City, IA 51102			LAB USE ONLY Work Order: 1H80865 Temperature: _____ Turn-Cooler: No			Custody Seal Containers Intact COC/Labels Agree Preservation Confirmed Received on Ice			
SITE INFORMATION Sampler: Lana Dake / Kim Trunk Project: Weekly Permit Testing			SPECIAL INSTRUCTIONS None Turn Around Time <input checked="" type="checkbox"/> Standard <input type="checkbox"/> RUSH, need by ____ / ____ / ____						
Number	Sample Identification / Client ID	Matrix	Sample Type	Date	Time	Number of Containers	Analyses		
01-001	Raw-Influent Waste (C)	Water	COMP	8/7/18	0731-0735	1	nitrogen-total flu-351.2	p=365.4	01
02-001	Effluent After Disinfection (G)	Water	GRAB	8/18/18	1245pm	1	eg=1664		02
03-001	Effluent After Disinfection (C)	Water	COMP	8/7/18	0745-0749	1	nitrogen-total flu-351.2	p=365.4	03
Relinquished By: <u>Lana Dake</u> Date/Time: <u>8/18/18 11:00am</u> Relinquished By: <u>Brittany</u> Date/Time: <u>8/18/18 11:50</u> Received By: _____ Date/Time: _____ Original - Lab Copy Yellow - Sampler Copy									

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